

**MULTIPLEXED DATA TRANSMISSIONS THROUGH A
COMMUNICATION LINK**

ABSTRACT OF THE INVENTION

5 A communication technique enables the efficient transmission of data through
a communication link having a large delay bandwidth product and/or a high bit error
rate. The communication technique multiplexes data from one or more data sources
through a plurality of communication connections to increase the overall throughput
and to reduce the average data transfer delay of the communication link. Each
communication connection has a set of communication connection parameters that
10 may be uniquely configured so that each connection carries a particular type of data at
a particular effective priority level. Each communication connection may be uniquely
configured to have a particular sending buffer size, to deliver messages having a
particular length to an underlying layer and to send the messages into the link at a
particular rate to orchestrate the manner in which the communication connections
15 send data through the link.